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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,485	03/16/2004	Joachim Ruch	RUCH	1205
20151	7590	03/23/2006	EXAMINER	
HENRY M FEIEREISEN, LLC 350 FIFTH AVENUE SUITE 4714 NEW YORK, NY 10118			SORKIN, DAVID L	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/801,485	<b>Applicant(s)</b> RUCH ET AL.	
	<b>Examiner</b> David L. Sorkin	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.  
 4a) Of the above claim(s) 22 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-21 and 23-30 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-8, 10-21, 23 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Wobbe et al. (US 5,318,358). Wobbe ('358) discloses a comb element (5) with structural elements set back from an involute surface (see Figs. 2 and 4).

Regarding claim 5, the elements have a base body constructed to resemble the shape of a truncated pyramid or block shape (see Figs. 2 and 4). Regarding claim 6, the elements have a base body defined by a bottom and a pointed end, said body having a cross section which decreases from the bottom face to the pointed end (see Fig. 2).

Regarding claim 7, the base body is configured of substantially conical shape (see Figs. 2 and 4). Regarding claim 8, the surface structure elements are arranged at a surface density such as to realize at least  $10^8$  looping possibilities (see Fig. 4). Regarding claim 10, the surface elements are configured to maintain a minimum distance in relation to the surface elements of an interacting further said comb element to avoid any cutting action between the comb element and the further comb element (see Fig. 4).

Regarding claim 11, Wobbe ('358) discloses two closely intermeshing screws (S) rotating in the same direction (see col. 3, lines 28-32; Fig. 2) for advancing plastic melt in a transport direction, each of the screws supporting at least one comb element (5)

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defining an involute surface and comprising on its involute surface a plurality of surface structure elements which are set back from the involute surface (see Figs. 2 and 4).

Regarding claim 12, the comb element is arranged downstream of a feed device (13) (see Fig. 1). Regarding claims 13-18, "inclusion of material or article worked upon by a structure being claimed, does not impart patentability to the claims" *In re Otto* 136 USPQ 458, 459 (CCPA 1963). "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Also, "the manner or method in which such machine is to be utilized is not germane to the issue of patentability of the machine itself" *In re Casey*, 152 USPQ 235 (CCPA 1967).

Regarding claim 19, each screw includes a plurality of comb elements arranged behind each other (see Fig. 4). Regarding claim 20, the comb elements are arranged on the screw in axial spaced-apart relationship (see Fig. 4). Regarding claim 21, each of the screws supports a screw element (see Fig. 1). Regarding claim 23, Wobbe ('358) discloses a screw (S) comprising a screw body; and at least one comb element (5) disposed on the screw body and defining an involute surface, said comb element comprising on its involute surface a plurality of surface structure elements which are set back from the involute surface (see Figs. 2 and 4). Regarding claim 27, the elements have a base body constructed to resemble the shape of a truncated pyramid or block shape (see Figs. 2 and 4). Regarding claim 28, the elements have a base body defined by a bottom and a pointed end, said body having a cross section which decreases from the bottom face to the pointed end (see Fig. 2). Regarding claim 29, the base body is

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configured of substantially conical shape (see Figs. 2 and 4). Regarding claim 30, the surface structure elements are arranged at a surface density such as to realize at least  $10^8$  looping possibilities (see Fig. 4).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 9 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wobbe et al. (US 5,318,358). The apparatus of Wobbe ('358) was discussed above. Regarding claims 2 and 24, Wobbe ('358) further discloses that the surface structure elements extend inwardly from the involute surface in a perpendicular relationship to a tangential direction (see Fig. 2) and regarding claim 9, the comb element and further comb element are on parallel screws (see Fig. 4). The specific sizes of claims 2-4, 9 and 24-26 are not disclosed. *In re Rose* 105 USPQ 237 (CCPA 1955) and *Gardner v. TEC System, Inc.* 220 USPQ 777 (Fed. Cir. 1984) are relied upon regarding the obviousness of selecting a size.

### ***Response to Arguments***

5. Applicant states regarding the instant invention that "the comb elements do not intermesh". However, claims 1 reads: "A comb element with closely intermeshing involute surface for a twin-screw extruder with closely intermeshing screws...". The claims certain do not include a negative limitation prohibiting the comb element from

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being capable of intermeshing. Oppositely, claim 1 refers to a capability of the comb element to intermesh.

6. Applicant states regarding the applied prior art reference Wobbe et al. ('358) "Applicant fails to recognize any structures in a same radial plate that are set back from an involute surface in the absence of an intermeshing arrangement", but does not relate this statement to an claim limitations. The claims to not refer to "a same radial plane". The claims do not recite "in the absence of an intermeshing arrangement". Whether a element is intend to be used in an intermeshing or non-intermeshing arrangement during an particular intended use is not germane to the patentability of the subcombination element.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Sorkin  
Primary Examiner  
Art Unit 1723

DLS